DISTRICT OF COLUMBIA
WATER AND SEWER AUTHORITY
Board of Directors

Meeting of the
Environmental Quality and Operations Committee

1385 Canal St. SE, Washington DC 20003
Thursday, July 18, 2019
9:30 a.m.

	I.	**Call to Order**	Adam Ortiz Chair
9:30 a.m.	**II.**	**AWTP Status Update**	Aklile Tesfaye
		1. BPAWTP Performance	
9:45 a.m.	**III.**	**Wastewater Engineering Overview**	Algynon Collymore
10:05 a.m.	**IV.**	**Action Items**	Len Benson

Joint Use

1. Contract No.: 130090 - Division Z – Poplar Point Pumping Station Replacement and Main Outfall Sewers Diversion, E.E. Cruz & Company, Inc.

Non-Joint Use

1. Contract No.: 190020 - Sanitary Sewer Lateral Replacement, Anchor Construction Corporation
2. Contract No.: 190030 - Lead Service Line Replacement, Anchor Construction Corporation
3. Contract No.: 190050 - Water Main Infrastructure Repair and Replacement, Fort Myer Construction Corporation.
4. Contract No.: 170130 - Soldiers' Home Reservoir Upgrades, American Contracting & Environmental Services, Inc.

10:20 a.m.	**V.**	**Water Distribution**	Jason Hughes

1. Coliform Testing
2. LCR Compliance Testing
3. Fire Hydrant Upgrade Program
    a. Status Report of Public Fire Hydrants
    b. Out of Service Fire Hydrant Map

10:35 a.m. **VI.** **Other Business / Emerging Issues**

10:40 a.m. **VII.** **Executive Session***

11:00 a.m. **VIII.** **Adjournment** Adam Ortiz
Chair

* The DC Water Board of Directors may go into executive session at this meeting pursuant to the District of Columbia Open Meetings Act of 2010, if such action is approved by a majority vote of the Board members who constitute a quorum to discuss: matters prohibited from public disclosure pursuant to a court order or law under D.C. Official Code § 2-575(b)(1); contract negotiations under D.C. Official Code § 2-575(b)(1); legal, confidential or privileged matters under D.C. Official Code § 2-575(b)(4); collective bargaining negotiations under D.C. Official Code § 2-575(b)(5); facility security under D.C. Official Code § 2-575(b)(8); disciplinary matters under D.C. Official Code § 2-575(b)(9); personnel matters under D.C. Official Code § 2-575(b)(10); proprietary matters under D.C. Official Code § 2-575(b)(11); decision in an adjudication action under D.C. Official Code § 2-575(b)(13); civil or criminal matters where disclosure to the public may harm the investigation under D.C. Official Code § 2-575(b)(14), and other matters provided in the Act.

Follow-up Items from Prior Meetings:

1. EVP, Ops & Engr, DC Water: Provide a briefing to the Committee regarding preventative and corrective maintenance programs on water, storm and sanitary sewer pump stations also including performance of DC Water's SCADA system. **[Target: September 2019]**
2. Vice President, Wastewater Operations, DC Water: Provide an overall assessment of the CHP program with respect to its operating costs versus cost savings and revenue generated and present to the Committee during a future meeting. **[Target: October 2019]**
3. Vice President, Wastewater Operations, DC Water: Provide a presentation on the Advanced Wastewater Treatment Plant and Wet Weather Treatment Facility operating parameters and the flow split logic relative to the volume of CSO flow captured in the tunnels going through the AWWTP versus the WWTF. **[Target: September 2019]**
4. Manager, Green Infrastructure, DC Water: Conduct a robust discussion with the Committee regarding per/acre costs of developing, operating and maintaining grey vs. green infrastructure. **[The Committee requested DCCR to return in 6 months to address this item. Target: December 2019]**

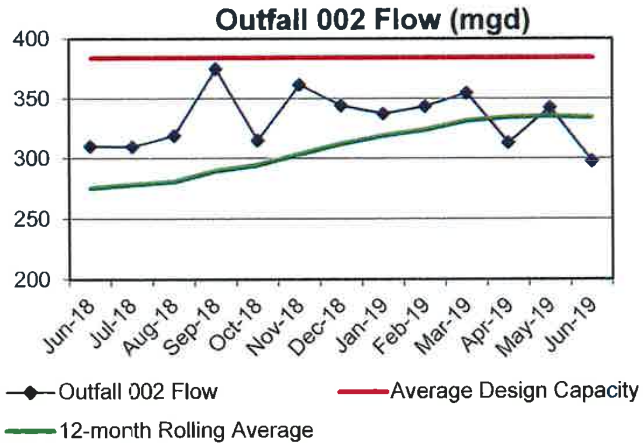
Blue Plains Advanced Wastewater Treatment Plant

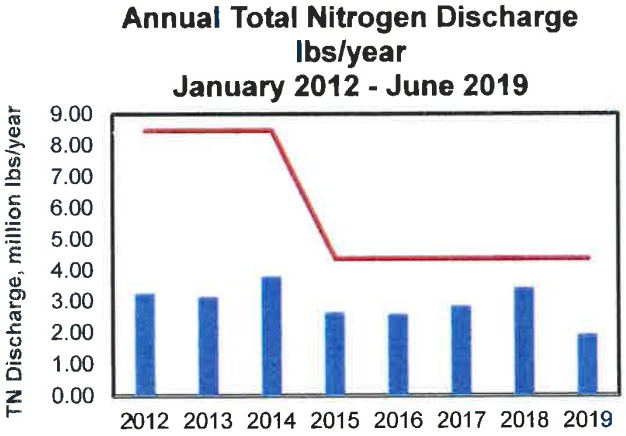
Performance Report

Environmental Quality and Operations Committee

July 18, 2019

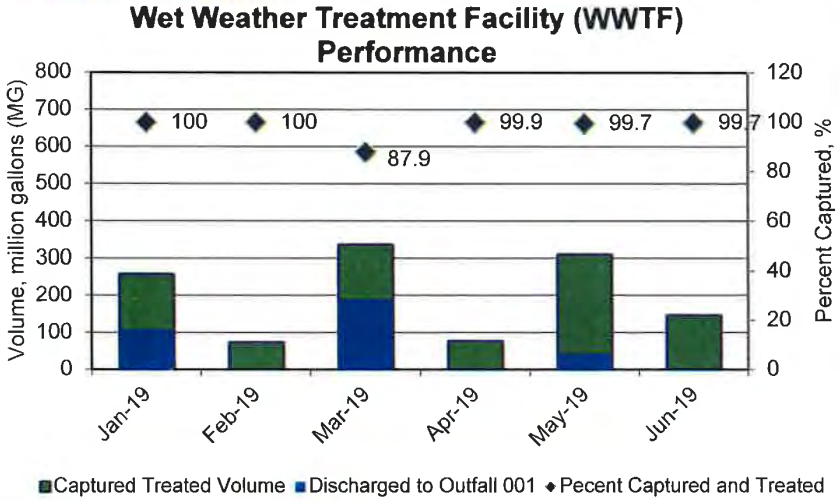
Complete Treatment Performance

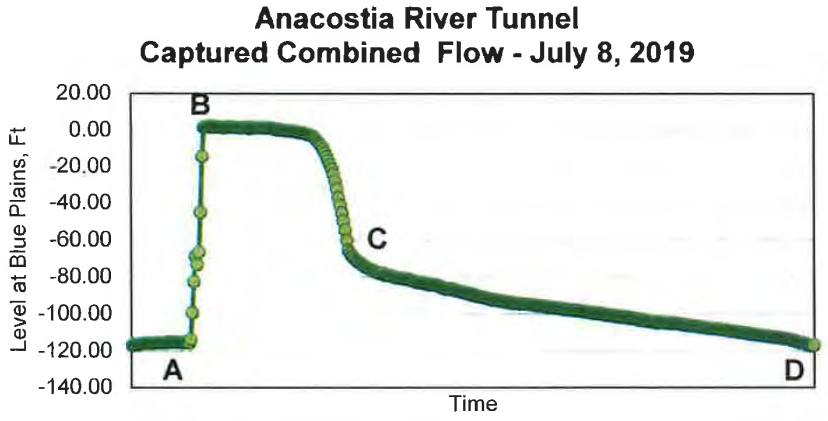




- Annual Average flow remained above 300 MGD since November 2018
- Plant performance was excellent with all effluent quality requirements well below or within the NPDES permit requirements
- The total pounds of nitrogen discharged in the complete treatment effluent is on track to remain below the NPDES permit discharge limit of 4,377,580 lbs. /year.

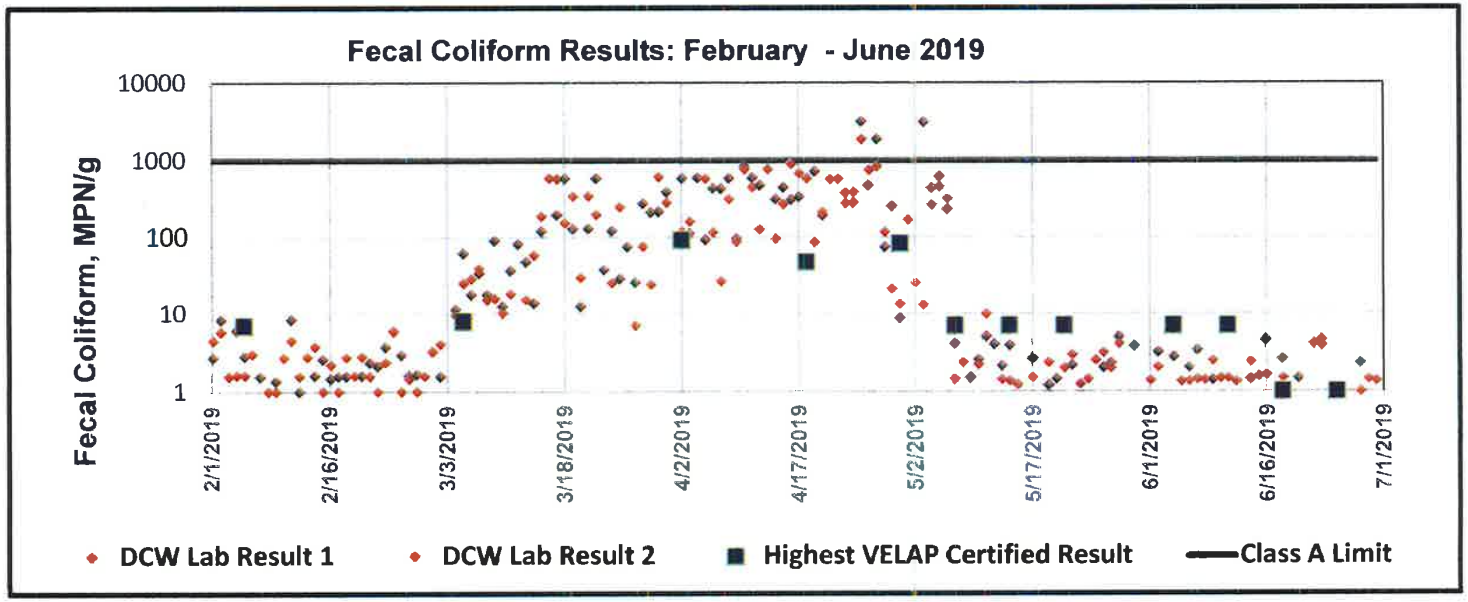
Wet Weather Treatment Facility Performance





- Since commissioning on March 20, 2018 and through June 2019 ~ 5,805 Million Gallons (MG) captured and treated
- Over 2,350 wet tons of trash, debris, and other solids removed
- July 8, 2018 Wet Weather Event:
  - Total precipitation at National Airport ~ 2.2" in less than an hour
  - Tunnel volume ~120 MG
  - Diversion start ~ 7/8 @ 8.55 AM (A)
  - Tunnel filled ~7/8 @10:10 AM within 45 mins. of flows arriving at Blue Plains (B)
  - Last diversion ~ 7/8 @ 6.60 PM (C)
  - Tunnel emptied ~ 7/9 @4:45 PM after 22 hrs. from last diversion (D)
  - Total captured volume ~170 MG
  - Overflow ~ 50 MG (preliminary calculations; may change based on further data review and processing)

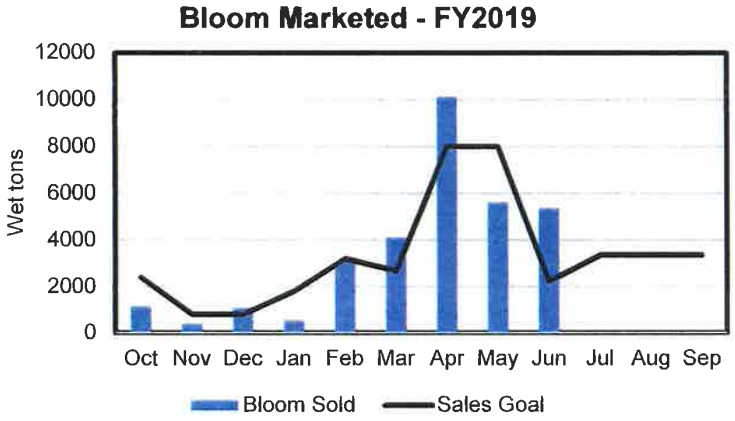
Class A Biosolids Quality



- Fecal Coliform values on daily process monitoring samples remained below 10 MPN/gram since May 7, 2019 and consistent with the low levels measured historically
- None of the compliance samples analyzed by VELAP certified laboratory exceeded the 1,000 MPN/gram Class A limit

Class A Biosolids Quality
Bloom Marketing

- Root cause for elevated levels is associated with one of four anaerobic digesters
- Digester isolated on May 6, 2019
- Active measures taken to prevent recurrence
- Finalizing a plan to bring the digester back into operations



- In June, 5,389 tons marketed to bring the total for fiscal year to 31,500 or 79% of the 40,000 tons goal
- Goal for the remaining three months is 8,500 tons

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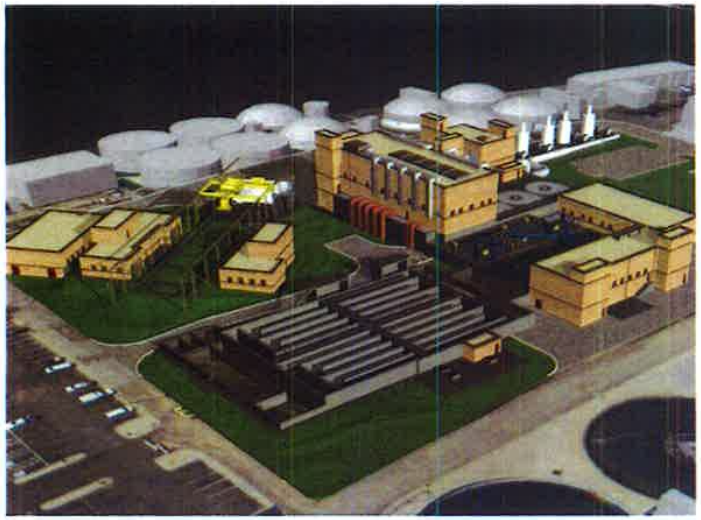
Employee Training - WWTF



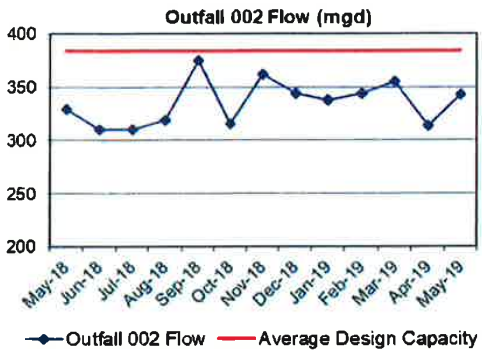
- Objective: Engage staff to learn process intent, operating philosophy, and control strategies
- Class room and hands-on engagement
- Train-the-Trainer approach with front line supervisors as trainers
- Five sessions per employee
- 44 employees engaged

Process training for supervisors using participatory teaching methods → SWOT analysis and SMART Goal development with supervisors → Training for operators led by supervisors

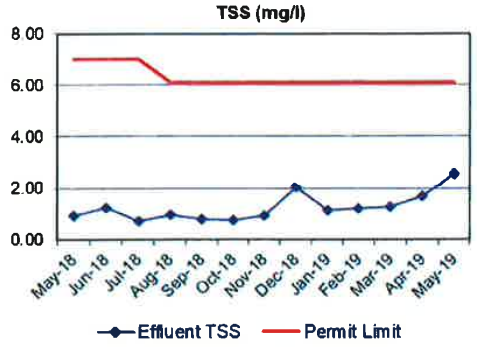
6

BLUE PLAINS ADVANCED WASTEWATER TREATMENT PLANT
PERFORMANCE REPORT – MAY 2019

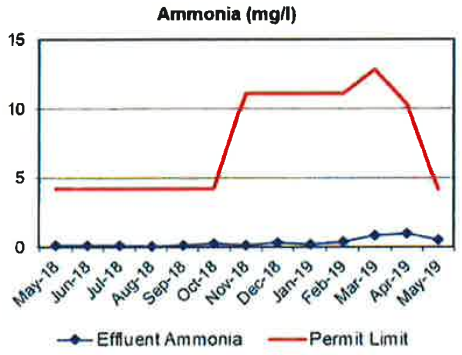
Average plant performance for the month of May 2019 was excellent with all effluent parameters well below the seven-day and monthly NPDES permit requirements. The monthly average flow through complete treatment and discharge to outfall 002, was 343 MGD. There were 42.5 million gallons of treated, captured combined flows directed to Outfall 001 during the month. The following figures compare the plant performance with the corresponding NPDES permit limits.



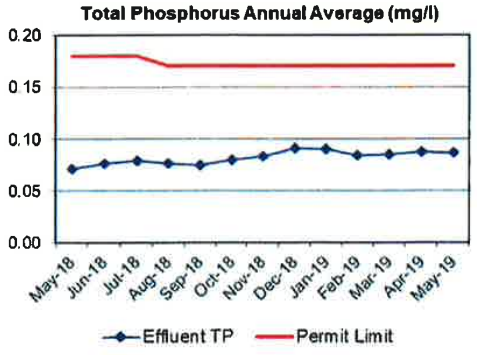
This graph illustrates the monthly average influent flow to the plant. The design average flow is 384 MGD. Blue Plains has a 4-hour peak flow capacity of 555 MGD through complete treatment. Once the plant is at capacity, up to 225 MGD of additional captured combined system flows from the tunnel can be treated through enhanced clarification, disinfection and dechlorination.



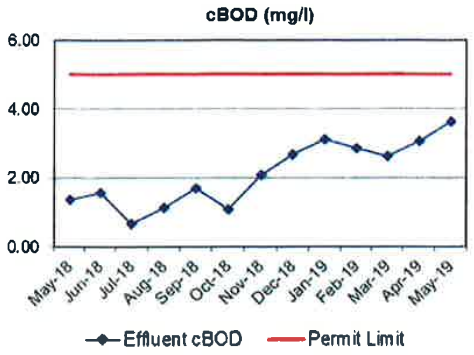
Effluent Total Suspended Solids (TSS) is a measurement of the amount of solid material that remains suspended after treatment. The effluent TSS concentration for the month averaged 2.56 mg/L, which is below the 6.1 mg/L permit limit.



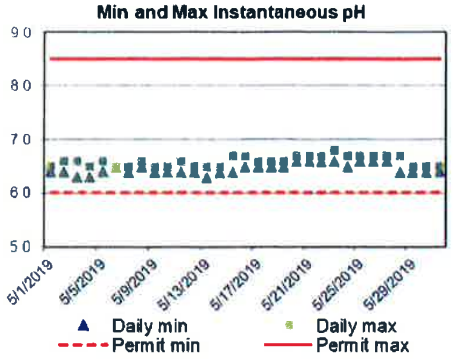
The Ammonia Nitrogen (NH3-N) is a measurement of the nitrogen found in ammonia. For the month, effluent NH3-N concentration averaged 0.50 mg/L and is below the 4.1 mg/L seasonal limit.



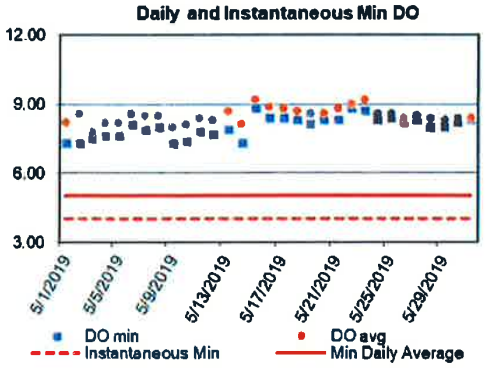
The Total Phosphorus (TP) is a measurement of the particulate and dissolved phosphorus in the effluent. The 12-month rolling average effluent TP concentration is 0.10 mg/L, which is below the 0.17 mg/L limit.



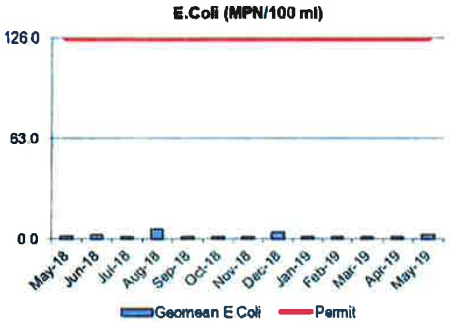
Carbonaceous Biochemical Oxygen Demand (CBOD) is a measurement of the amount of oxygen required for the decomposition of organic materials. The effluent CBOD concentration averaged 3.64 mg/L, which is below the 5.0 mg/L limit.



pH is a measurement of acidity of the effluent. The minimum and maximum pH observed were 6.3 and 6.8 standard units, respectively. The pH was within the permit limits of 6.0 and 8.5 for minimum and maximum respectively.



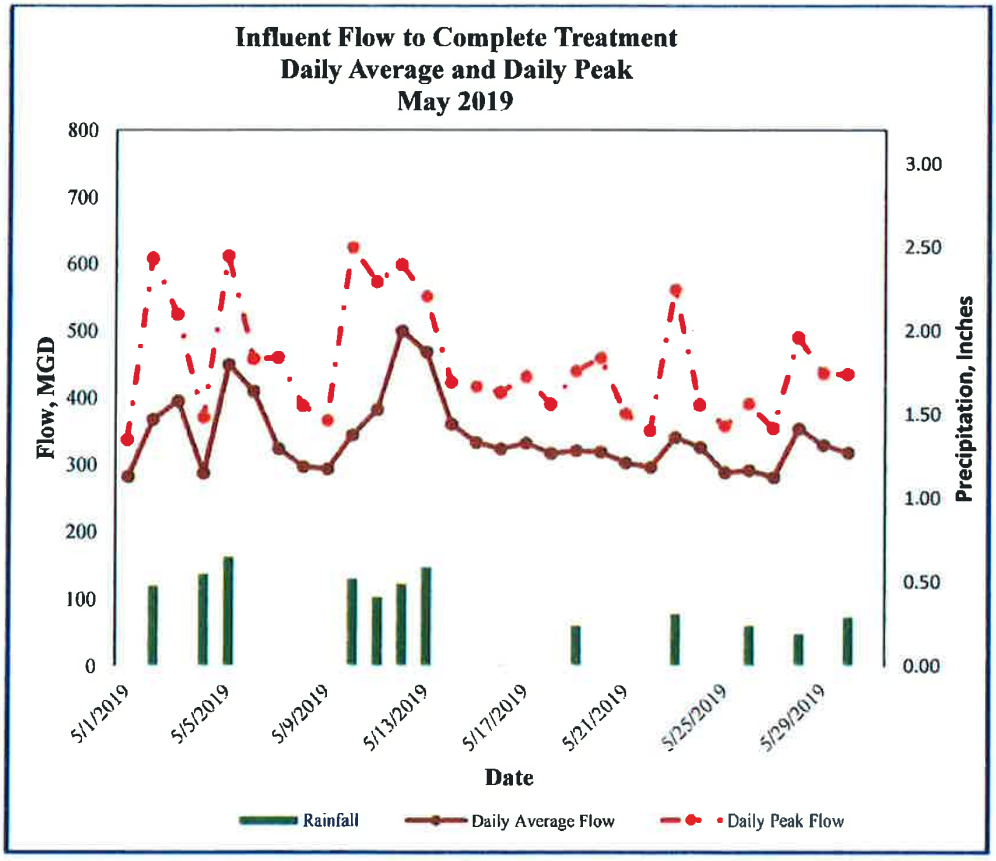
Dissolved Oxygen (DO) is a measure of the atmospheric oxygen dissolved in water. The DO readings for the month are within the permit limits. The minimum daily average is 7.8 mg/L. The minimum instantaneous DO reading is 7.3 mg/L. The minimum daily average and instantaneous permit limits are 5.0 mg/L and 4.0 mg/L, respectively.



E.coli is an indicator of disease causing organisms (pathogens). The E.coli permit limit is 126/100mL. The E coli geometric mean is 2.9 /100mL, and well below the permit limit.

Wet Weather Impact on Plant Performance

During the month of May 2019, the Washington Metropolitan Region received above average precipitation (4.97 inches vs normal of 3.99 inches) as measured at the National Airport. The plant's performance was excellent and the event had minimal impact on the quality of the effluent discharge through the complete treatment outfall. All effluent quality parameters were below the weekly and monthly average NPDES permit limits.



Wet Weather Treatment Facility (WWTF) at Blue Plains

Brief Description

The Wet Weather Treatment Facility at Blue Plains provides treatment for Combined Sewer Overflows (CSO) conveyed through the Long Term Control Plan (LTCP) tunnel systems to Blue Plains. With a design capacity of 250 MGD, the facility consists of sub systems including- a flow surcharge wet well and coarse screens, upstream of five 3,000 Horse Power (HP) Tunnel Dewatering Pumps (TDPs). The TDPs lift the flow 156 ft to the above ground Enhanced Clarification Facility (ECF), which comprises of fine screening, grit removal, and high rate clarification (HRC). The effluent from HRC is disinfected and dechlorinated before it's discharged through Outfall 001. When flow rates to the main plant are below the permitted peak flow rates of 555 OR 511 MGD, the effluent from the HRC (or a portion of it) is directed to the main plant for complete treatment. On an average year, the facility is designed to receive approximately 2.6 billion gallons of CSOs and provide treatment with effluent total suspended solids quality comparable to that of Secondary Treatment effluent. The WWTF, along with the first section of the Anacostia Tunnel System were placed in operation, three days in advance of the March 23rd Consent Decree date.

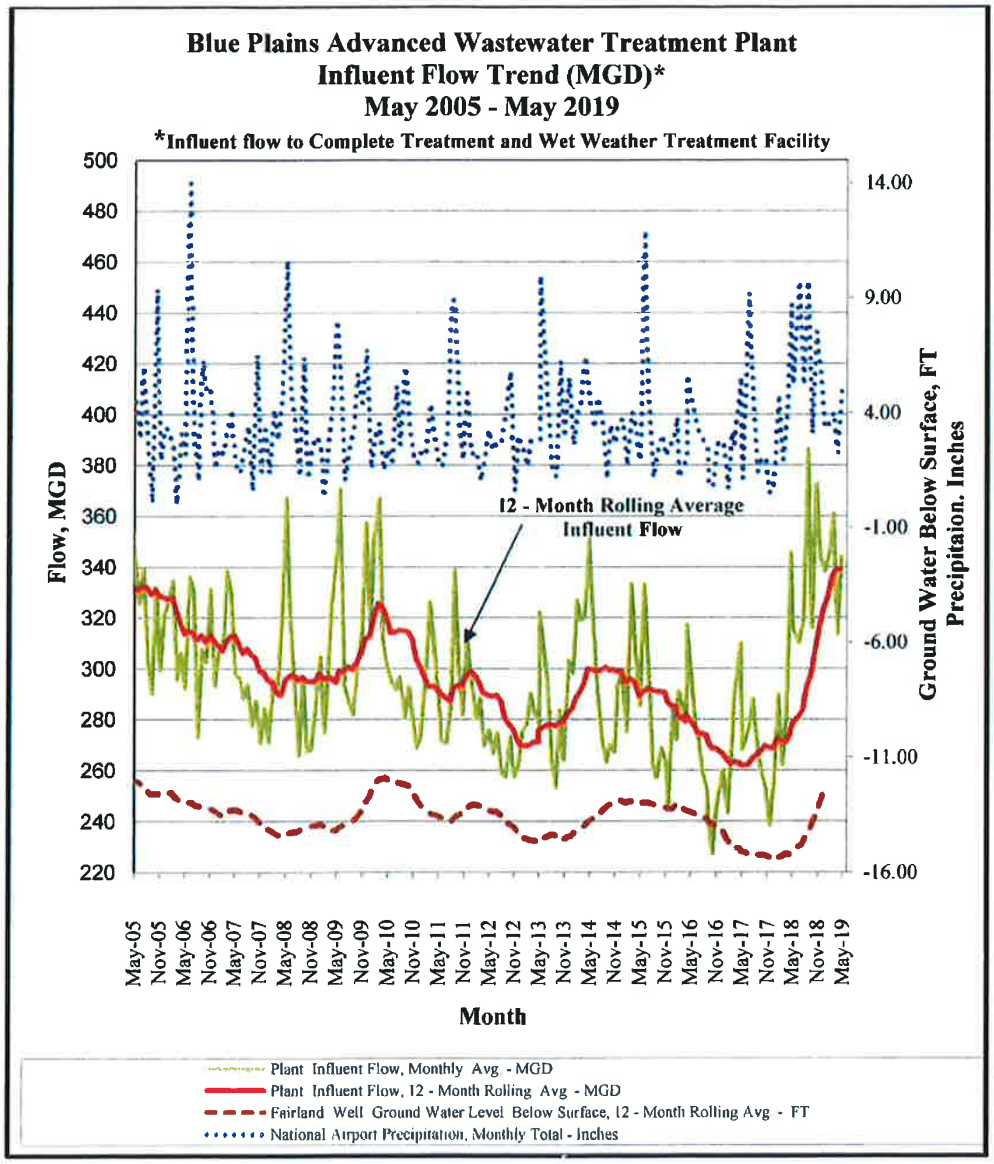
Aerial rendering of the Wet Weather Treatment Facility

Performance

During the month of May, a total of 310.5 million gallons (MG) of CSO captured in the tunnel system, was pumped, and treated using the ECF. A portion of the treated flow or 268 MG was directed to the main plant to maximize complete treatment and the remaining portion of the treated captured combined flow, or 42.5 MG, was disinfected, dechlorinated and discharged through Outfall 001. The quality of the effluent discharged was within anticipated ranges. Since the commissioning of the first section of the Anacostia River Tunnel Systems and the WWTF on March 20, 2018 and including the wet weather events that occurred in May 2019, the total volume pumped and treated through the WWTF is 5,658 MG. During the same period, 2,085 wet tons of screenings and grit (trash, debris, sediment) were removed, that would otherwise have been discharged into the Anacostia River.

Plant Influent Flow Trend

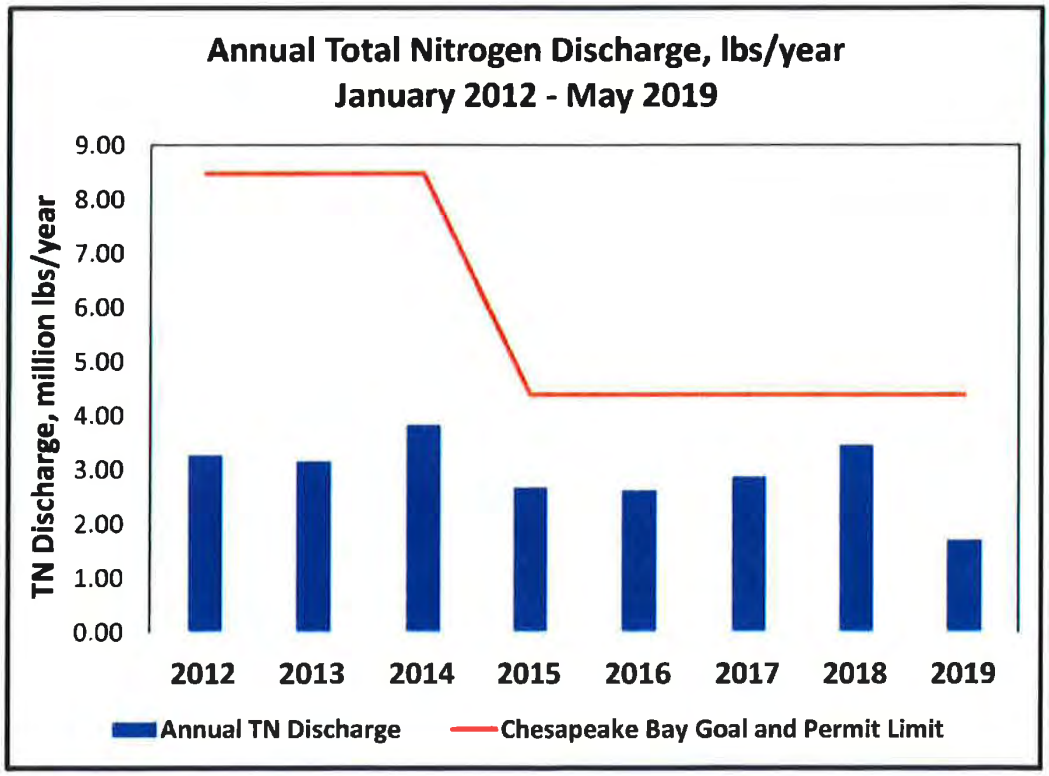
The graph below shows a long-term influent flow trend to the plant ending May 2019. While for any given month the flow is weather dependent, the 12-month rolling average influent flow exceeded 300 MGD since November 2018.



Blue Plains Total Nitrogen (TN) Removal – Performance

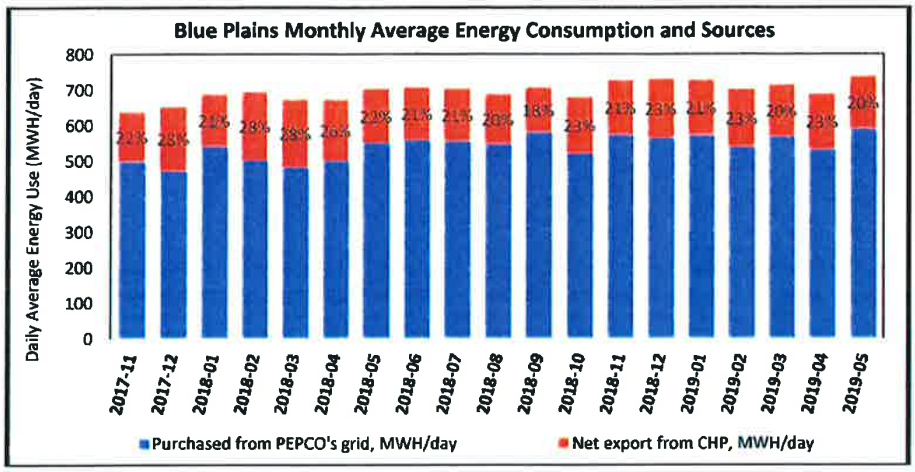
The graph below shows total annual nitrogen discharge, in million pounds per year, over an eight-year period ending May 2019. In May 2019, the monthly average TN concentration and total load in the complete treatment effluent were 3.28 mg/L and 241,071 lbs., respectively.

The total pounds of nitrogen discharged in the complete treatment effluent during the current calendar year (through May 2019) is 1,705,136 lbs and on track to remain below the NPDES permit discharge limit of 4,377,580 lbs. /year. The performance corresponds to average flow of 335 MGD, maximum month flow of 371 MGD, and average wastewater temperature above 16 °C observed during the period. The Blue Plains Enhanced Nitrogen Removal Facility (ENRF) is designed to meet the TN discharge limits at influent loads corresponding to annual average flows of 370 MGD, maximum month flows of 485 MGD, and operating wastewater temperatures below 12°C.



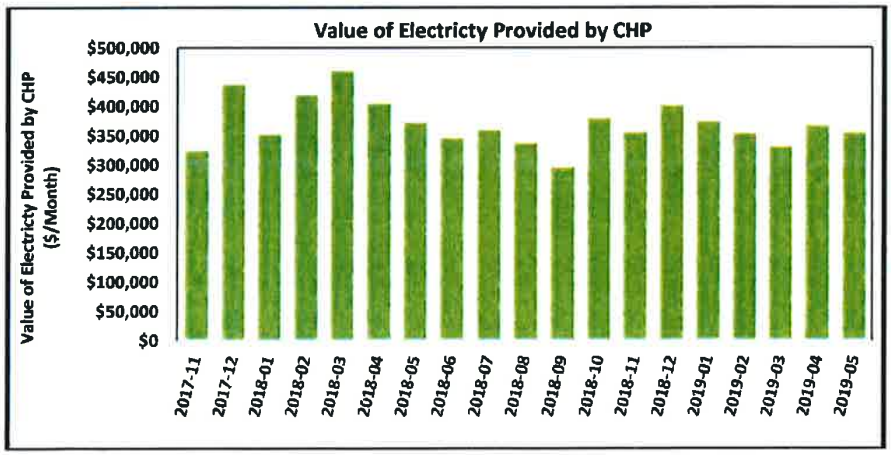
Blue Plains Electricity Generation and Usage

In May 2019, the average energy consumed at Blue Plains was 688 megawatt hours per day (MWH/day) or 2.24 MWH of electricity per million gallons of wastewater processed through complete treatment. The Combined Heat and Power (CHP) facility generated an average of 157 MWH/day, making up for 23% of total energy consumed at Blue Plains. The remaining 531 MWH/day was purchased from PEPCO.



The graph above is based on power monitors installed at the Main Substation and CHP, and reflects average energy consumed at Blue Plains in MWH/day. Of the total use, the energy purchased from PEPCO and net energy supplied by CHP are indicated by the blue and orange highlights, respectively.

The graph below shows the monthly value of the net electricity exported by CHP by assuming unit price of $78/MWH of electricity.

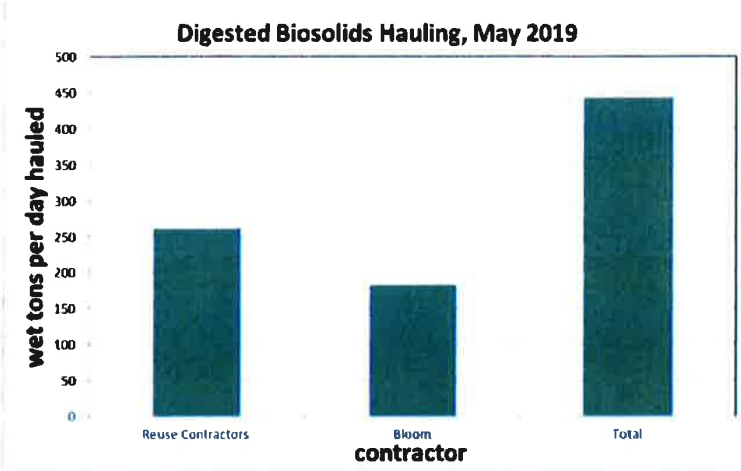


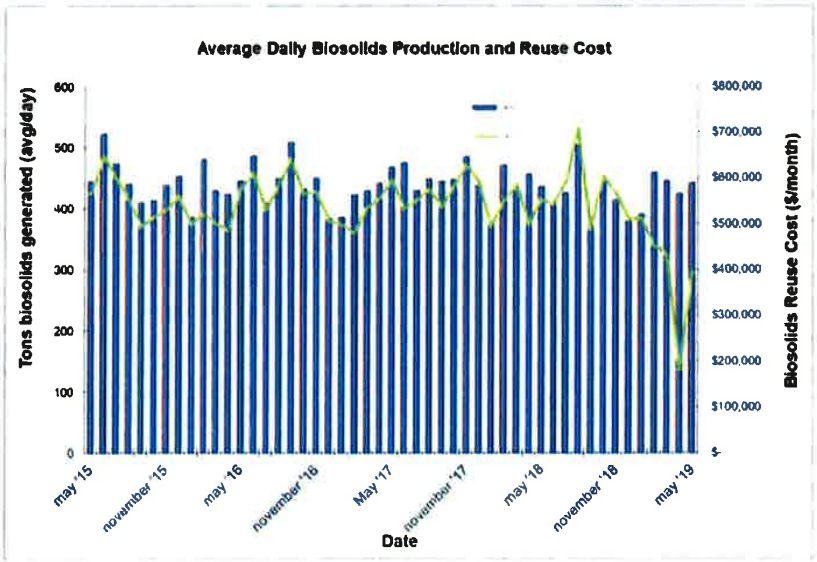
DC Water Participation in the PJM Voluntary Curtailment Program

One component of the DC Water electric bill is a Demand Charge, which is assessed each month throughout the PJM billing year, June 1 through May 31. The Demand Charge is calculated by PJM, the Independent System Operator of the interstate electric grid that serves our region. PJM Demand is the average of the highest Megawatt usages occurring in five "one-hour" periods during the Peak Planning Period. The Peak Planning Period is June 1 through September 30 of each year which is applied to the following PJM billing year, June 1 through May 31. DC Water's Demand is determined by its contribution to the PJM Peak. Note that only one contributing one-hour period is accounted for in a single day. DC Water's Demand Charge is the sum of its average demand contribution described above multiplied by the Capacity Price that is set by PJM based on electric suppliers bidding into the capacity market each year. This year, DC Water is participating in the PJM voluntary curtailment program. We receive notification from our wholesale electricity supplier, Constellation, when PJM load forecasts and weather forecasts, predict that a system annual peak could be established during the following day. We have engaged over twenty of our team members across DC Water in education on the program and they are included in each notification. They are requested to take all prudent actions to reduce your electric usage while ensuring the safety and integrity of operations. We also are directing our CHP operator to blend natural gas with the biogas within allowable limits to maximize internal generation, thus further reducing DC Water's demand. We anticipate that we may receive ten to twelve Peak Alert notifications during the planning period. We have received five alerts to date. Each MW of Demand reduction represents a savings of about sixty to eighty thousand dollars for the year. We will evaluate the results achieved upon receipt of all the information from PJM.

RESOURCE RECOVERY

In May, biosolids hauling averaged 428 wet tons per day (wtpd). The average percent solids for the Class A material was 29.4%. The graph below shows average daily biosolids produced and the associated monthly cost for reuse (transportation and application cost) for a three-year period ending May 2019. In May, diesel prices averaged $3.37/gallon, and with the contractual fuel surcharge, the weighted average biosolids reuse cost (considering the marketed material) was $31.87 per wet ton.



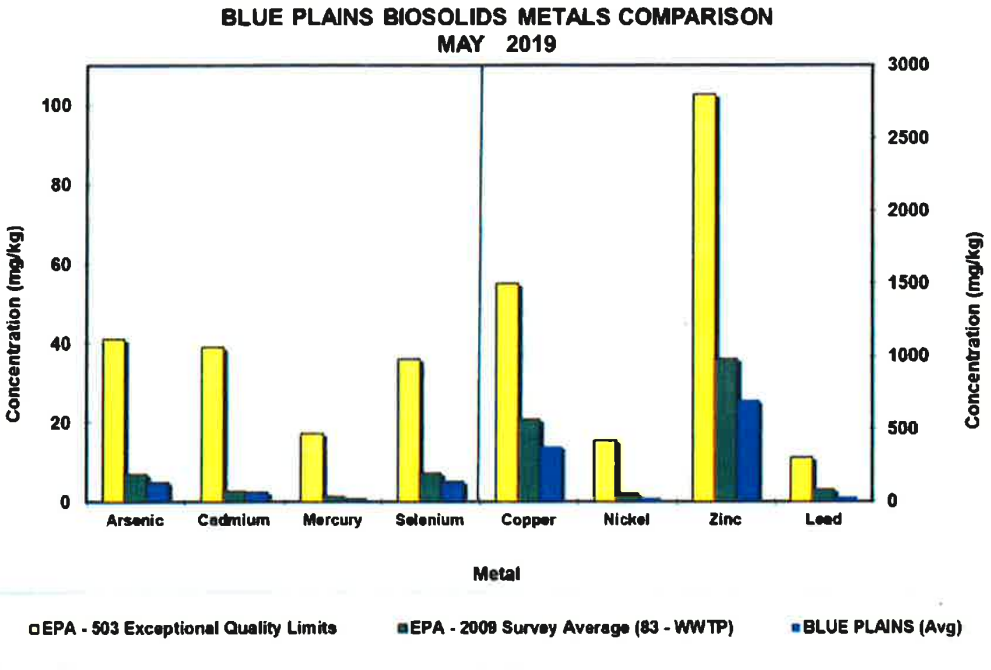


The average quanities of Class A biosolids transported and applied on farms by the three contracts (WSSC's Recyc, DC Water's Nutriblend and Amerigreen) and the quantites marketed as Bloom are shown on the graph above. In May, 5,389 wet tons of Bloom were distributed to 15 customers.

Product Quality

Metals

All biosolids produced during the month of May met Class A Exceptional Quality (EQ) requirements required by EPA. The graph below shows the EPA regulated heavy metals average concentrations in the Class A biosolids. The concentrations are considerably below the regulated exceptional quality limits (EPA-503 Exceptional Quality Limits) and the national average (EPA-2009 Survey Average).



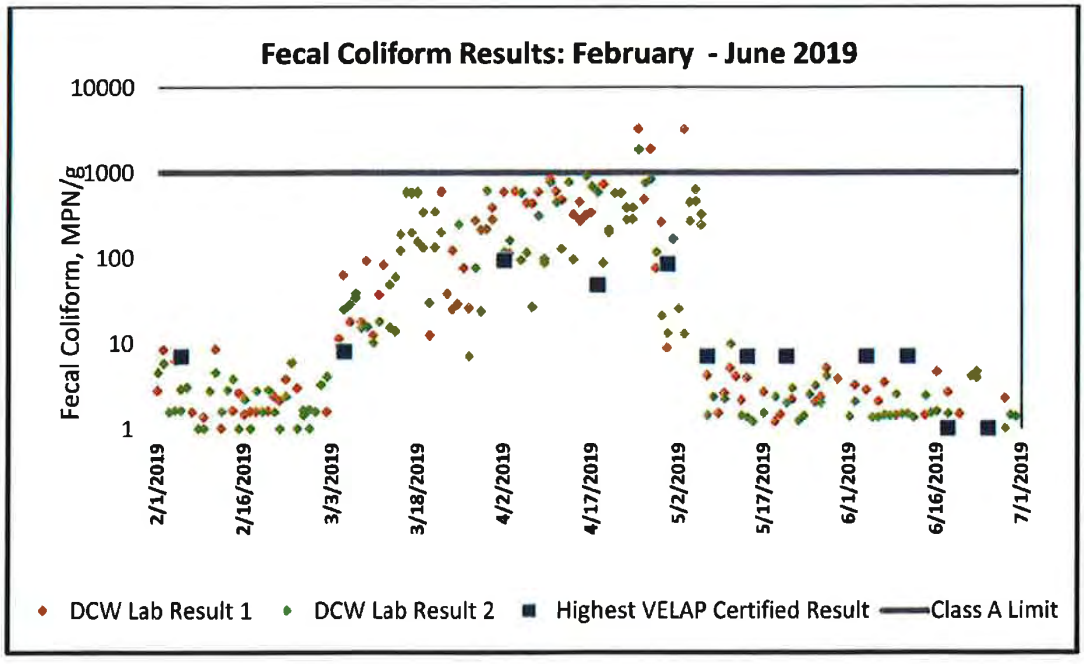
Vector Attraction

Vector Attrraction Reduction is measured by the reduction in Volatile Solids (VS) or organic compounds that are odorous and attract nuisance vectors such as flies and rodents. DC Water anaerobic digesters reduced VS by over 65 percent, well above the required 38 percent minimum.

Fecal Coliform (June 2019 update)

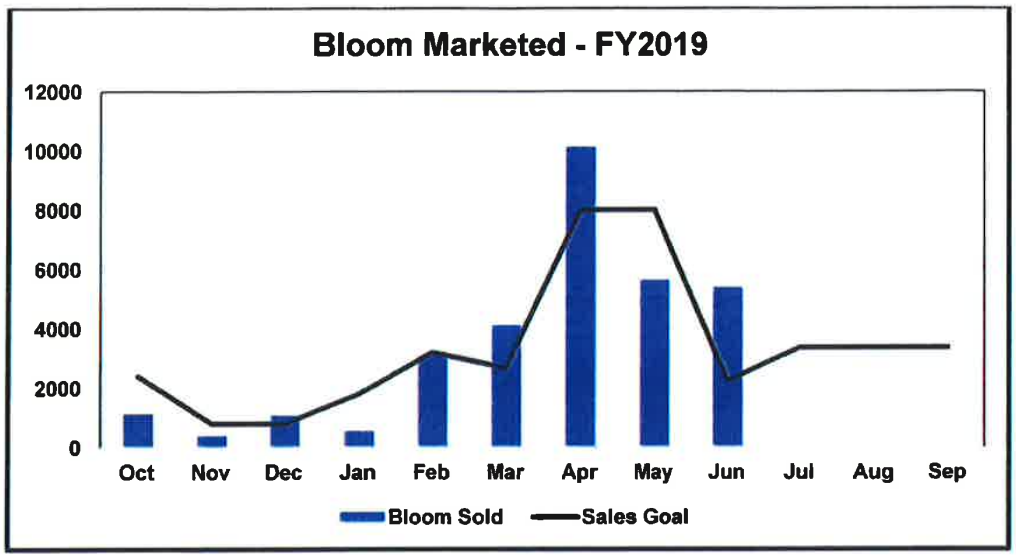
Since May 7, 2019, fecal coliform values in daily biosolids cake samples, analyzed by DC Water Laboratory, have remained below 10 MPN/gram and well below the 1,000 MPN/gram requirement for Class A certification. The results of all compliance samples collected and analyzed by a Virginia Environmental Laboratory Accreditation Program (VELAP) certified commercial laboratory have never exceeded the Class A limit. In addition, all solids produced and processed through the Thermal Hydrolysis Process (THP) met the time and temperature regimes required to reduce pathogenic organisms.

DC Water has determined the root cause for the elevated levels of fecal coliform in March, April and during the first week of May was associated with one of the four Anaerobic Digesters. The digester was isolated on May 6, 2019 and the Authority is in the process of developing a final plan to bring the digester back into operation.



Bloom Marketing (June 2019 update)

Bloom marketing resumed on May 21, 2019 after two weeks of non-detect results observed beginning May 7, 2019. During the month, 5,389 tons was marketed to bring the total for the fiscal year to 31,500 tons or 79 percent of the 40,000 tons goal. Based on progress to-date, the Authority anticipates achieving the marketing goals for the fiscal year.



WATER QULIATY AND PRETREATMENT

The Blue Plains Water Quality & Pretreatment group manages the Industrial Pretreatment Program, including temporary dewatering dischargers (construction dewatering, etc.) and dental dischargers, as well as the Hauled Waste Program. Staff also provide specialized sampling and program management support for the Blue Plains NPDES permit, including low level PCB and mercury monitoring as well as storm water management and regulatory compliance support. Staff participated in the National Capital Region Environmental Enforcement Group Meeting hosted by DOEE and EPA and attended the National Pretreatment and Pollution Prevention Workshop and Training hosted by NACWA this month.

Industrial Pretreatment Program

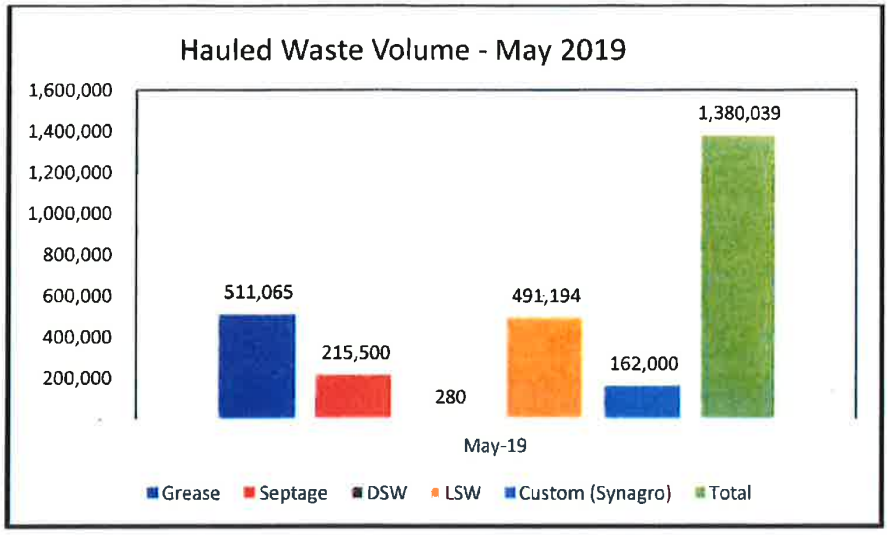
DC Water currently manages twelve (12) Significant Industrial User (SIU) and sixteen (16) Non-Significant Industrial User (NSIU) wastewater discharge permits. Staff conducted compliance monitoring at four SIUs this month (Amtrak and three WMATA facilities). All SIUs and NSIUs are in compliance with discharge standards for the current month.

DC Water currently manages 83 Temporary Discharge Authorization (TDA) permits, primarily for construction site discharges of groundwater and/or surface runoff in the combined sewer area. Two new TDA permits were issued this month. All TDA permittees are currently in compliance with discharge standards.

Hauled Waste Program

DC Water currently manages 40 Waste Hauler permits for discharge of domestic septage, portable toilet waste, grease trap waste, groundwater or surface runoff, and other types of waste (if approved in advance and meet pretreatment standards). One new Waste Hauler permit was issued this month and four permits were renewed. One waste hauler remains banned due to failure to pay monthly disposal costs.

DC Water received 554 hauled waste loads (1,380,039 gallons) from permitted haulers this month. Manifest forms from each truck entering the plant are collected by the security guards and picked up daily by Pretreatment staff and information is manually entered into an access database. Two hauled waste samples were collected this month and results were in compliance with discharge criteria.



Revenue Generation

The following billing (revenue) and receivables (cash) occurred this month for Groundwater/Retail Sewer (GWRS) billing for disposal fees in accordance with TDA permits issued under the Industrial Pretreatment Program, Industrial User (IU) billing for high strength waste, permitting fees, and annual compliance fees issued under the Industrial Pretreatment Program, and Waste Hauler (WH) billing for permitting and disposal fees issued under the Hauled Waste Program:

Cat. Code	FY (Oct-May) Revenue Posted	FY (Oct-May) Cash Received
GWRS	$297,739.51	$91,998.18
IU	$93,142.43	$80,066.66
WH	$532,175.83	$662,190.05
Total	**$923,057.77**	**$834,254.89**

water is life

Presentation to the Environmental Quality and Operations Committee

July 18, 2019

Adam Ortiz, **Chair**

DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

Leonard Benson, Sr. Vice President and Chief Engineer

Agenda

I. People
II. Mission
III. Functions
IV. Initiatives and Projects

Department of Wastewater Engineering

Fifteen engineers and technicians who perform planning, program management, project management, design, construction inspection

Mission

- **DC Water's Vision:**

Exceed expectations by providing high quality water services in a safe, environmentally friendly, and efficient manner.

- **DC Water's Mission:**

We will be known for superior service, ingenuity and stewardship to advance the health and well-being of our diverse workforce and communities.

- **Department of Wastewater Engineering's Mission:**

Plan and deliver a capital improvement plan that supports DC Water's Vertical Assets, including the Advanced Wastewater Treatment Plant at Blue Plains, and support the Chief Engineer on Metropolitan Council of Governments and Intermunicipal Agreement issues.

Department of Wastewater Engineering Functions

Department of Wastewater Engineering Functions – Program Branch

- Provide staff support for environmental policy issues affecting DC Water
- Technical and policy coordination with other jurisdictions and federal agencies
- Develop and maintain long-term facility planning process
- Provide engineering data for development and maintenance of the Capital Improvement Plan (CIP)
- Generate bid documents for construction and rehabilitation projects
- Review and approve PCS, SCADA and I&C engineering documents for compliance with established guidelines and standards
- Manage the Engineering responsibilities for all PCS and SCADA related projects from planning, design, construction, commissioning and operational support.
- Coordinate with all DC Water user and customer groups/Departments on all SCADA, PCS, and I&C matters
- Explore new technologies that can be used to increase operational efficiency of our wastewater treatment, sewer collection and water distribution systems.

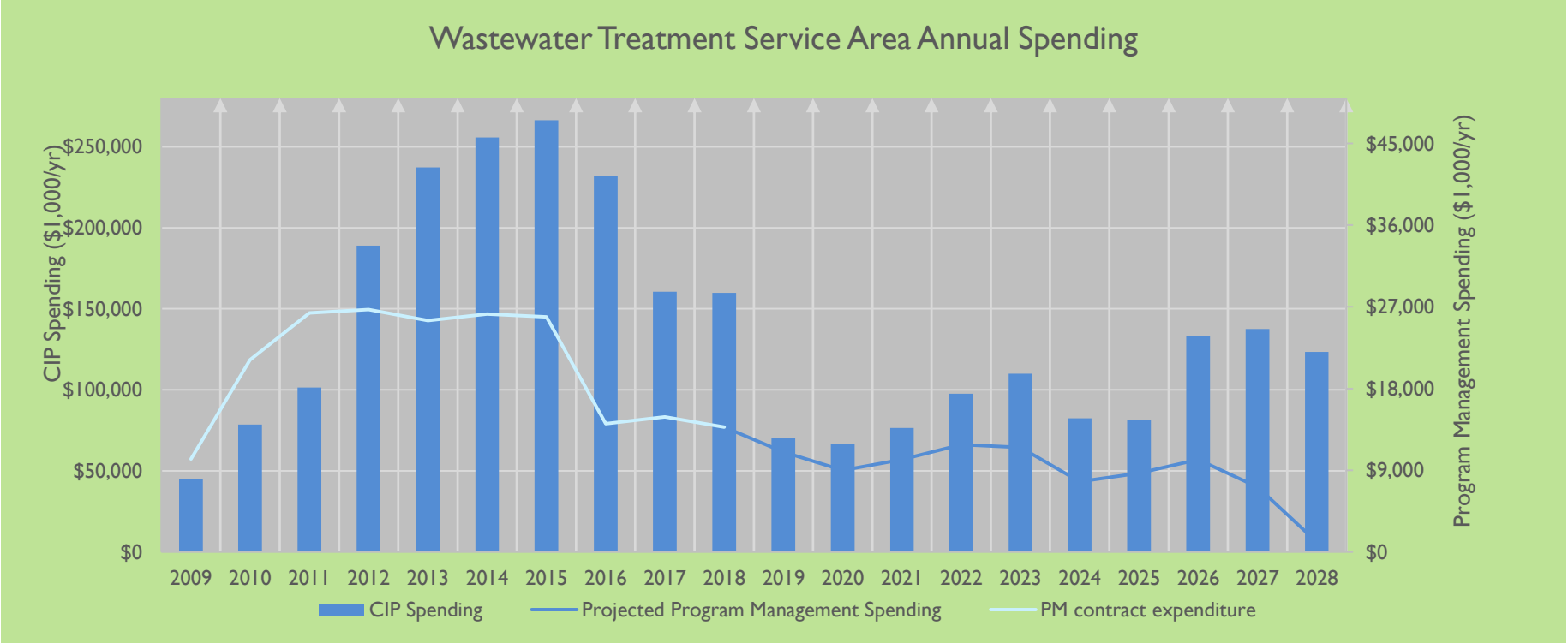
Department of Wastewater Engineering Functions – Construction Branch

- Administer contracts for construction management, new construction, major repairs, modifications and start-up to the Blue Plains Advanced Wastewater Treatment Plant
- Perform design reviews and coordinate construction work with other departments at Blue Plains

Initiatives

- Capital Cost Reduction
  - Transition to in-house resources for design management and construction management
  - New Program Management Contract Procurement with reduced scope
  - Extend asset life
  - Alternative contracting mechanisms (power purchase, on-call construction contracts)
  - Design with efficient O&M features

- O&M Cost Reduction
  - Energy Efficiency
  - Reduce Chemical Use
  - Automation
  - Design with efficient O&M features



Construction at Blue Plains AWTP

- **Gravity Thickener Upgrades Phase II**
  - $60M construction
  - NTP September 2019
- **Filter Influent Pumps 1-10**
  - $18M construction
  - NTP August 2019
- **Miscellaneous Facilities Upgrades 6**
  - $25M construction
  - NTP July 2019
  - Includes refurbishment of raw wastewater influent screens

Projects in Design for Blue Plains

COF Switchgear Replacement

- Replace obsolete switchgear in COF building
- Switchgear has reached the end of its useful lives
- Maintenance complicated by lack of spare parts
- Construction estimate at $12 million
- Advertise Construction August 2020

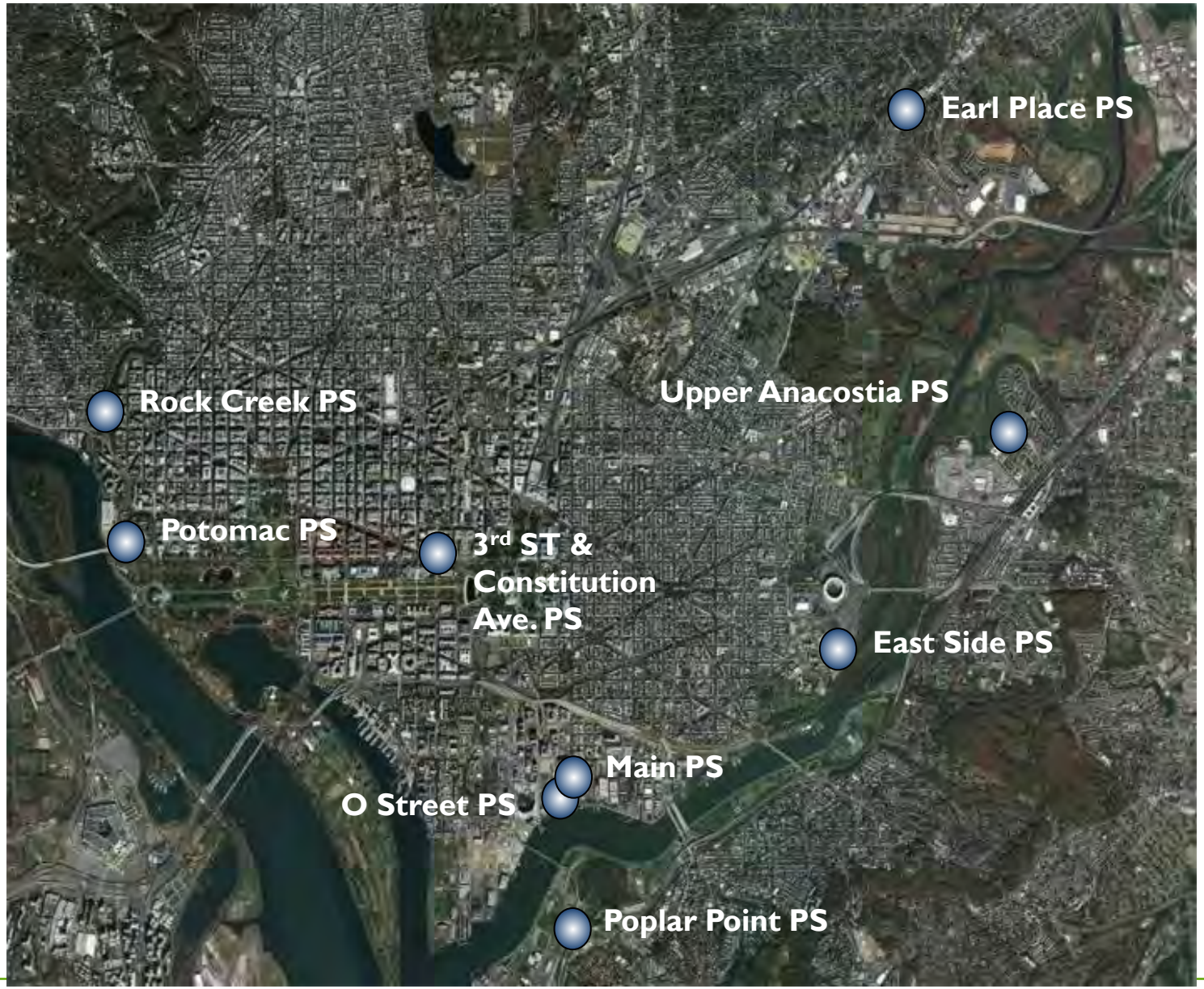
High and Low Pressure PSW Pump Systems

- Upgrade the High and Low Pressure Process Service Water pumping systems
- Upgrades necessary to meet projected demand, to provide redundancy in the system and to correct pump intake hydraulics
- Pumps have reached the end of their useful lives and are prone to failure.
- Construction estimate of $10 million
- Advertise Construction July 2020

Screens, Grit and Primary Facilities Upgrades (aka Headworks Electrical Upgrades)

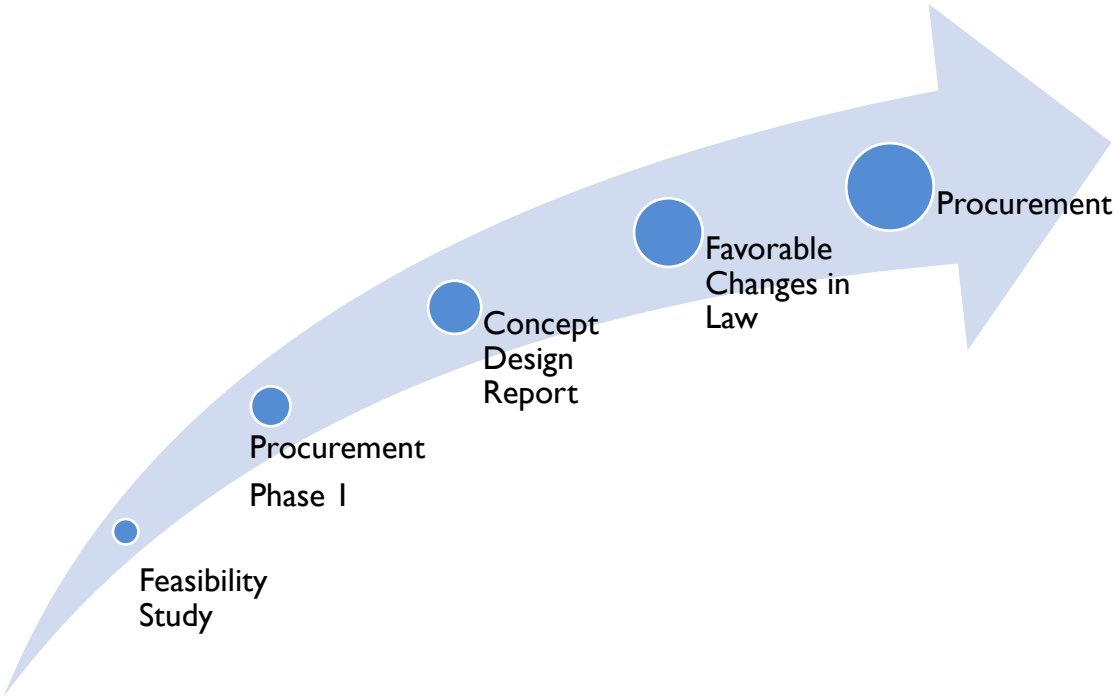
- Upgrades and improvements to power distribution and instrument and control
- Equipment has reached the end of useful life due to continuous exposure in corrosive environment
- Cost Estimate at $15 million
- Construction Start - April 2021

Wastewater Pump Stations



Design and Construction Underway at Blue Plains AWTP – Solar Panels

Rendering of solar array atop the Central Maintenance Facility roof



Power Purchase Agreement

Provider designs, permits and installs the system

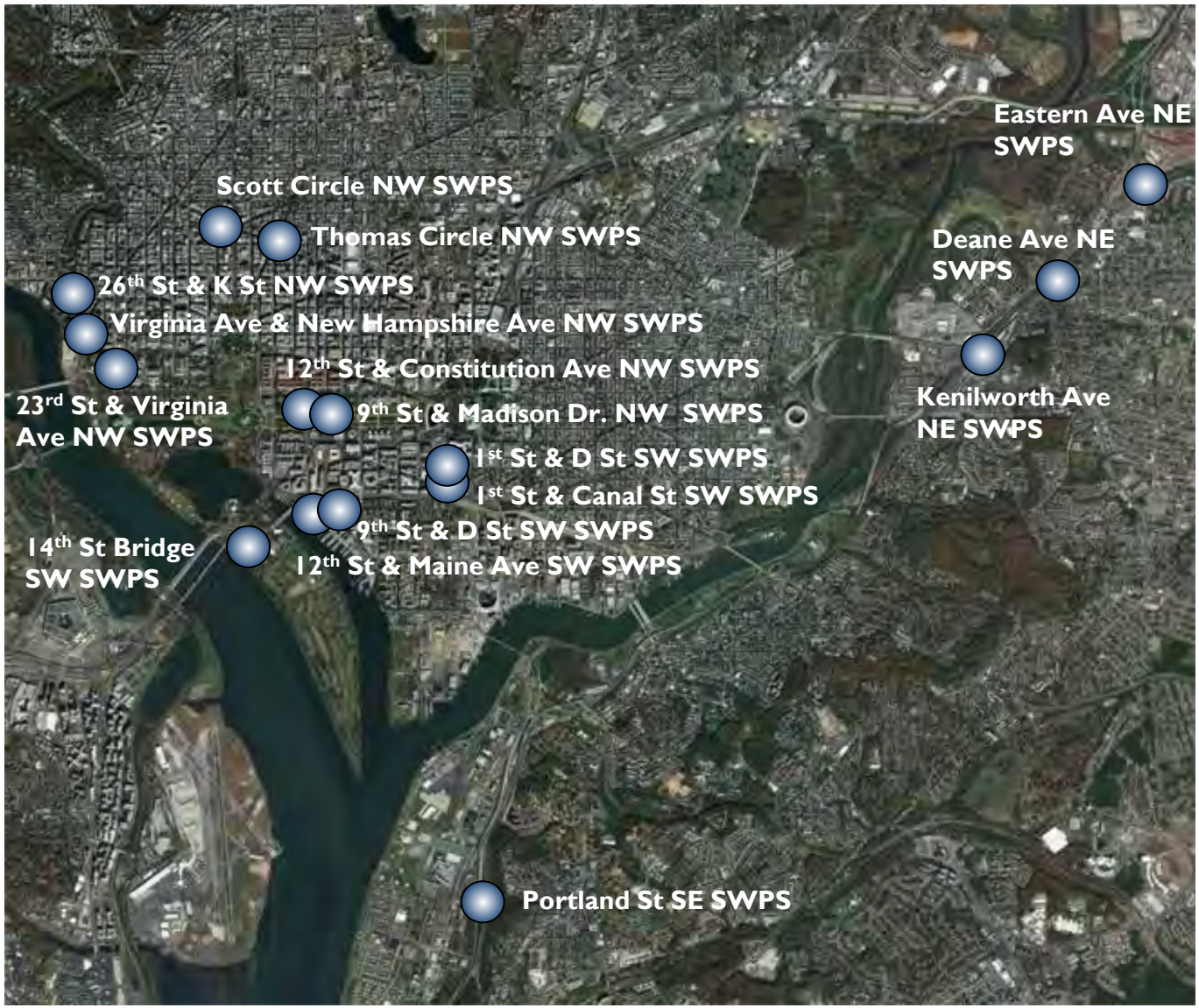
- DC Water purchases power
- 4MW Commercial Operation 2020
- Agreement includes design for phase 2 for an additional 8 MW
- Negotiation for phase 2 to begin in Fall 2019

Wastewater Pump Stations

1. Main* (240 MGD, storm 400 MGD)
2. Potomac* (460 MGD)
3. O Street* (45 MGD, storm 500 MGD)
4. East Side* (45 MGD)
5. 3rd & Constitution (2.9 MGD)
6. Earl Place (0.43 MGD)
7. Upper Anacostia (10 MGD)
8. Rock Creek (50 MGD)
9. Poplar Point* (55 MGD)

*Required firm capacity under the Nine Minimum Controls section of the Three Party Consent Decree & NPDES Permit

Stormwater Pump Stations



Stormwater Pump Stations

1. 1st Street & Canal Street SW (2.9 MGD)
2. Portland Street SE (2.2 MGD)
3. 9th Street and D Street SW (15.8 MGD)
4. 1st Street & D Street SW (23 MGD)
5. Scott Circle NW (3.6 MGD)
6. Thomas Circle NW (2.9 MGD)
7. 14th Street Bridge SW (14.4 MGD)
8. Deane Avenue NE (24.5 MGD)
9. Kenilworth Ave NE (5 MGD)
10. 12th Street and Maine Avenue SW (2.2 MGD)
11. 23rd Street and Virginia Avenue NW (2.2 MGD)
12. Virginia Avenue and New Hampshire Avenue NW (10.4 MGD)
13. 26th Street and K Street NW (19.6 MGD)
14. 9th Street and Madison Drive NW
15. Eastern Avenue NW (5.8 MGD)
16. 12th Street and Constitution Avenue NW (2.2 MGD)

Wastewater Pump Station

Potomac PS - before

Piping segment leaking at failed flange

Failed stop log chamber

Seal water system (failing)

Wastewater Pump Station

Potomac PS - after

Repairs to Stop Log Chamber

Repaired piping segment

New Seal Water Pump Skid and Controls

Stormwater Pump Station

1st St & Canal St
before

Flooded Dry Well

Temporary emergency pump

Station Capacity (MGD)	2.9	
Number of Pumps	2	1
Pump capacity (MGD)	2.9	0.29
HP of Pump	60	7.5

Pumps with leaking seal

16

Stormwater Pump Station

1st St & Canal St -after

New Pumps and Piping Installed

DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY
BOARD OF DIRECTORS CONTRACTOR FACT SHEET

ACTION REQUESTED

CONSTRUCTION CONTRACT CHANGE ORDER:

Division Z – Poplar Point Pumping Station Replacement and Main Outfall Sewers Diversion (Joint Use)

Approval to execute Change Order No. 04 for $4,375,785.00. The modification exceeds the Chief Executive Officers approval authority.

CONTRACTOR/SUB/VENDOR INFORMATION

PRIME:	SUBS:	PARTICIPATION:
E.E. Cruz & Company, Inc. 32 Avenue of the Americas, 13th Floor New York, NY 10013 Headquarters New York, NY 10013	None MBE participation None WBE participation	0.0% 0.0%

DESCRIPTION AND PURPOSE

Original Contract Value:	$53,452,275.00	
Value of this Change Order:	$4,375,785.00	
Cumulative CO Value, including this CO:	$4,375,785.00	
Current Contract Value, Including this CO:	$57,828,060.00	
Original Contract Time:	835 Days	(2 Years, 4 Months)
Time extension, this CO:	840 Days	
Total CO contract time extension:	888 Days	(2 Years, 5 Months)
Contract Start Date (NTP):	01-15-2015	
Anticipated Contract Completion Date:	10-04-2019	
Cumulative CO % of Original Contract:	8.19%	
Contract completion %:	96.25%	

Purpose of the Contract:

Provide the construction of Division Z – Poplar Point Pumping Station Replacement and Main Outfall Sewers Diversion in support of the DC Clean Rivers Project.

This work is required by a Consent Decree.

Original Contract Scope:

- Construct the Poplar Point Pumping Station
- Construct the Anacostia Main Interceptor Diversion Sewer
- Construct the Barry Road Replacement Sewer
- Construct the Main Outfall Sewers Diversion Chamber

Previous Change Order Scope:

- Change Order 01 extended Substantial Completion and Contract Completion Dates by total of 11 calendar days due to delays incurred during the September 2015 Papal Visit and January 2016 Winter Storm Jonas.
- Change Order 02 extended Substantial Completion and Contract Completion Dates by 37 calendar days due to delay incurred during Archeological Investigation Phase III work.
- Change Order 03 transferred $952,965.00 in Allowance funds to Bid Item No. 4 Additional Work from Bid Item No. 3, 6 and 9.

Current Change Order Scope:

- Agreed settlement of unexecuted Changes and resolution of all claims on the Contract.

PROCUREMENT INFORMATION

Contract Type:	Fixed Price	**Award Based On:**	Lowest responsive, responsible bidder
Commodity:	Construction	**Contract Number:**	130090
Contractor Market:	Open Market		

BUDGET INFORMATION

Funding:	Capital	**Department:**	DC Clean Rivers
Service Area:	Combined Sewer Overflow	**Department Head:**	Carlton M. Ray
Project:	CY, G1		

ESTIMATED USER SHARE INFORMATION

CY – Anacostia LTCP – Poplar Point Allocation [MJ20]

User	Share %	Dollar Amount
District of Columbia	90.00%	$3,493,277.10
Federal Funds	0.00%*	$
Washington Suburban Sanitary Commission	10.00%	$ 388,141.90
Fairfax County	0.00%	$
Loudoun County & Potomac Interceptor	0.00%	$
Total Estimated Dollar Amount	**100.00%**	**$3,881,419.00**

CY – Anacostia LTCP – Main Outfall Diversion Allocation [GIBP]

User	Share %	Dollar Amount
District of Columbia	41.22%	$ 189,443.41
Federal Funds	0.00%*	$
Washington Suburban Sanitary Commission	45.84%	$ 210,676.51
Fairfax County	8.38%	$ 38,513.73
Loudoun County & Potomac Interceptor	4.56%	$ 20,957.35
Total Estimated Dollar Amount	**100.00%**	**$ 459,591.00**

G100 – Small Local Sewer Rehab – Barry Rd Allocation [CAPM]

User	Share %	Dollar Amount
District of Columbia	100.00%	$ 34,775.00
Federal Funds	0.00%*	$
Washington Suburban Sanitary Commission	0.00%	$
Fairfax County	0.00%	$
Loudoun County & Potomac Interceptor	0.00%	$
Total Estimated Dollar Amount	**100.00%**	**$ 34,775.00**

Combined

User	Share %	Dollar Amount
District of Columbia	84.96%	$3,717,495.51
Federal Funds	0.00%*	$
Washington Suburban Sanitary Commission	13.68%	$ 598,818.41
Fairfax County	0.88%	$ 38,513.73
Loudoun County & Potomac Interceptor	0.48%	$ 20,957.35
Total Estimated Dollar Amount	**100.00%**	**$4,375,785.00**

* Eligible for Federal Appropriation Funding. Appropriation funding is insufficient to fund all eligible contracts. Federal Appropriation Funding may be used if additional funding becomes available or if other eligible projects are postponed.

Leonard R. Benson — Date: 7-11-19
Senior Vice President, Chief Engineer

Dan Bae — Date: 7/12/19
VP of Procurement and Compliance

Matthew T. Brown — Date: 7/12/19
CFO and EVP of Finance and Procurement

David L. Gadis — Date:
CEO and General Manager

DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY
BOARD OF DIRECTORS CONTRACTOR FACT SHEET

ACTION REQUESTED

CONSTRUCTION CONTRACT:

Sanitary Sewer Lateral Replacement Contract for FY20 – FY22 (Non-Joint Use)

Approval to execute a construction contract for $9,971,935.00

CONTRACTOR/SUB/VENDOR INFORMATION

PRIME:	SUBS:		PARTICIPATION:
Anchor Construction Corporation 2254 25th Place NE Washington, DC 20018 MBE	S&J Services, Inc. Hyattsville, MD	MBE	29.9%
	AJK Enterprise LLC Washington, DC	MBE	2.2%
	R&R Contracting Utilities, Inc. Olney, MD	WBE	3.8%
	Acorn Supply & Distributing White Marsh, MD	WBE	2.3%

DESCRIPTION AND PURPOSE

Contract Value, Not-To-Exceed:	$9,971,935.00
Contract Time:	1,095 Days (3 Years)
Anticipated Contract Start Date (NTP):	10-01-2019
Anticipated Contract Completion Date:	09-30-2022
Bid Opening Date:	05-29-2019
Bids Received:	3
Other Bids Received	
Fort Myer Construction Company	$13,874,435.00
Sagres Construction Corporation	$21,058,642.60

Purpose of the Contract:

To provide Indefinite Delivery and Indefinite Quantity (IDIQ) emergency and scheduled repairs to the sewer lateral system on an as-needed basis during normal work hours, after-hours, weekends, and holidays. This Contract allows DC Water to strategically utilize a combination of in-house and contractor crews to respond to emergency conditions impacting the sewer lateral system and address scheduled system rehabilitation work as needed.

Contract Scope:

- Emergency Repair Work of Sanitary Sewer Laterals
- Chemical Root Treatment of Sanitary Sewers
- Sewer Lateral Reinstatement Connection to CIPP Main
- Sewer Lateral Liner - CIPP
- Sewer Lateral CCTV Inspection
- General Cleaning of Sewer Laterals
- Replace/Extend/Reconnect Building Sewer Lateral/Connection Pipe 4-Inch thru and including 12-inch Diameter PVC
- Add or Replace Building Sewer Cleanout Pipe
- Add or Replace Street Wye or Thimble with Wye Saddle
- Any other contingent items that are deemed necessary

Federal Grant Status:

- Construction Contract is not eligible for Federal grant funding assistance.

PROCUREMENT INFORMATION			
Contract Type:	Unit Price	**Award Based On:**	Lowest responsive, responsible bidder
Commodity:	Construction	**Contract Number:**	190020
Contractor Market:	Open Market		

BUDGET INFORMATION			
Funding:	Capital	**Department:**	Sewer Services
Service Area:	Sanitary	**Department Head:**	Dunbar C Regis
Project:	JI, LN, M9		

ESTIMATED USER SHARE INFORMATION		
User	Share %	Dollar Amount
District of Columbia	100.00%	$9,971,935.00
Federal Funds	0.00%	$0.00
Washington Suburban Sanitary Commission	0.00%	$0.00
Fairfax County	0.00%	$0.00
Loudoun County & Potomac Interceptor	0.00%	$0.00
Total Estimated Dollar Amount	**100.00%**	**$9,971,935.00**

Leonard R. Benson July 12, 2019

Leonard R. Benson, SVP and Chief Engineer — Date

Dan Bae July 12, 2019

Dan Bae, VP
Procurement and Compliance — Date

Matthew T. Brown July 12, 2019

Matthew T. Brown, CFO and EVP
Finance and Procurement — Date

David L. Gadis
CEO and General Manager — Date

DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY
BOARD OF DIRECTORS CONTRACTOR FACT SHEET

ACTION REQUESTED

CONSTRUCTION CONTRACT:

Lead Service Line Replacement Contract FY20-FY22 (Non-Joint Use)

Approval to execute a construction contract for $7,289,400.00

CONTRACTOR/SUB/VENDOR INFORMATION

PRIME:	SUBS:		PARTICIPATION:
Anchor Construction Corp. 2254 25th Place NE Washington, DC 20018 MBE	Acorn Supply and Distribution Inc. White March, MD	WBE	6.0%
	S and J Services Inc. Hyattsville, MD	MBE	32.0%

DESCRIPTION AND PURPOSE

Contract Value, Not-To-Exceed:	$7,289,400.00
Contract Time:	1,095 Days (3 Years)
Anticipated Contract Start Date (NTP):	10-01-2019
Anticipated Contract Completion Date:	09-30-2022
Bid Opening Date:	06-05-2019
Bids Received:	3
Other Bids Received	
Capitol Paving Inc.	$7,456,000.00
Fort Myer Corp.	$9,134,600.00

Purpose of the Contract:

To provide Indefinite Delivery and Indefinite quantity (IDIQ) of lead service line replacements and temporary pavement restoration at various locations within the District of Columbia. The contract will also consist of providing private property side agreements and documentation. Scopes of work will be developed and issued to the contractor on a task order basis as needed by DC Water.

Contract Scope:

- Remove and replace existing lead service lines.
- Install new copper service line from corporation stop to building.
- Installation of Meter Boxes, Frame and Covers.
- Replace Water Service lines.
- Installation of Curb Stop and Curb Stop Box.
- Private side tie-in and negotiation / coordination with homeowners.

Federal Grant Status:

- Construction Contract is not eligible for Federal grant funding assistance.

PROCUREMENT INFORMATION

Contract Type:	Unit Price	**Award Based On:**	Lowest responsive, responsible bidder
Commodity:	Construction	**Contract Number:**	190030
Contractor Market:	Open Market		

BUDGET INFORMATION			
Funding:	Capital	**Department:**	Water Services
Service Area:	Water	**Department Head:**	Jason Hughes
Project:	BW		

ESTIMATED USER SHARE INFORMATION		
User	Share %	Dollar Amount
District of Columbia	100.00%	$7,289,400.00
Federal Funds	0.00%	$0.00
Washington Suburban Sanitary Commission	0.00%	$0.00
Fairfax County	0.00%	$0.00
Loudoun County & Potomac Interceptor	0.00%	$0.00
Total Estimated Dollar Amount	**100.00%**	**$7,289,400.00**

Leonard R. Benson July 15, 2019

Leonard R. Benson, SVP and Chief Engineer — Date

Dan Bae July 15, 2019

Dan Bae, VP
Procurement and Compliance — Date

Matthew T. Brown July 15, 2019

Matthew T. Brown, CFO and EVP
Finance and Procurement — Date

David L. Gadis
CEO and General Manager — Date

DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY
BOARD OF DIRECTORS CONTRACTOR FACT SHEET

ACTION REQUESTED

CONSTRUCTION CONTRACT:

Water Infrastructure Repair & Replacement Contract FY20-FY22 (Non-Joint Use)

Approval to execute a construction contract for $19,276,080.00

CONTRACTOR/SUB/VENDOR INFORMATION

PRIME:	SUBS:	PARTICIPATION:
Fort Myer Construction Corp. 2237 33rd St NE Washington, DC 20018 MBE	V. Fernandes Construction Co. Inc. Silver Spring, MD MBE Amerigal Construction Co. Inc. Glenn Dale, MD MBE United Construction Services LLC Upper Marlboro, MD WBE	 16.4% 15.9% 6.0%

DESCRIPTION AND PURPOSE

Contract Value, Not-To-Exceed:	$19,276,080.00
Contract Time:	1,095 Days (3 Years)
Anticipated Contract Start Date (NTP):	10-01-2019
Anticipated Contract Completion Date:	09-30-2022
Bid Opening Date:	06-12-2019
Bids Received:	3
Other Bids Received	
Capitol Paving, Inc.	$21,772,790.00
Anchor Construction Corp.	$25,980,337.80

Purpose of the Contract:

To provide Indefinite Delivery and Indefinite quantity (IDIQ) emergency water main repair and replacement of water service line in public and private space at various locations in Washington, DC. Scopes of work will be developed and issued to the contractor on a task order basis as needed by DC Water.

Contract Scope:

- Emergency rehabilitation of various size water mains.
- Rehabilitation and replacement of various types of valves, valve castings and valve boxes.
- Rehabilitation and replacement of fire hydrants, fire hydrants leads and lead service lines.
- Rehabilitation and replacement of Water Service Line in Public and Private Space.
- Cleaning and lining of six, eight and twelve inch diameter water mains.
- CCTV Water Main Inspection.

Federal Grant Status:

- Construction Contract is not eligible for Federal grant funding assistance.

PROCUREMENT INFORMATION

Contract Type:	Unit Price	**Award Based On:**	Lowest responsive, responsible bidder
Commodity:	Construction	**Contract Number:**	190050
Contractor Market:	Open Market		

BUDGET INFORMATION			
Funding:	Capital	**Department:**	Water Services
Service Area:	Water	**Department Head:**	Jason Hughes
Project:	JA,KW,KX		

ESTIMATED USER SHARE INFORMATION		
User	Share %	Dollar Amount
District of Columbia	100.00%	$19,276,080.00
Federal Funds	0.00%	$0.00
Washington Suburban Sanitary Commission	0.00%	$0.00
Fairfax County	0.00%	$0.00
Loudoun County & Potomac Interceptor	0.00%	$0.00
Total Estimated Dollar Amount	**100.00%**	**$19,276,080.00**

Leonard R. Benson July 15, 2019

Leonard R. Benson, SVP and Chief Engineer — Date

Dan Bae July 15, 2019

Dan Bae, VP
Procurement and Compliance — Date

Matthew T. Brown July 15, 2019

Matthew T. Brown, CFO and EVP
Finance and Procurement — Date

David L. Gadis
CEO and General Manager — Date

DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY
BOARD OF DIRECTORS CONTRACTOR FACT SHEET

ACTION REQUESTED

CONSTRUCTION CONTRACT:

Soldiers' Home Reservoir Upgrades (Non-Joint Use)

Approval to execute a construction contract for $5,401,000.00

CONTRACTOR/SUB/VENDOR INFORMATION

PRIME:	SUBS:		PARTICIPATION:
American Contracting & Environmental Services, Inc. 10330 Old Columbia Rd Suite 102 Columbia, MD 21046	TAG Distribution & Supply, LLC Gwynn Oak, MD	MBE	26.9%
	Matadi Construction, LLC Silver Spring, MD	MBE	1.8%
	Dulles Geotech & Material Testing Srv Chantilly, VA	MBE	1.6%
	SJ and Son Construction and Trucking Bowie, MD	MBE	0.7%
	Monumental Concrete, LLC Washington, DC	MBE	0.6%
	G.E. Frisco Co. Upper Marlboro, MD	MBE	0.1%
	Premiums, LLC Ellicott City, MD	WBE	3.7%
	MS. Pipe, LLC South Windsor, CT	WBE	2.1%
	Robnet, Inc. Baltimore, MD	WBE	0.1%

DESCRIPTION AND PURPOSE

Contract Value, Not-To-Exceed:	$5,401,000.00
Contract Time:	420 Days (1 Year 2 Months)
Anticipated Contract Start Date (NTP):	10-10-2019
Anticipated Contract Completion Date:	12-03-2020
Bid Opening Date:	06-12-2019
Bids Received:	4
Other Bids Received	
CPP Construction Company, Inc.	$6,334,000.00
W.M. Schlosser Company, Inc.	$6,733,000.00
Norair Engineering Corporation	$6,849,200.00

Purpose of the Contract:

Rehabilitate Soldiers' Home Reservoir located at Armed Forces Retirement Home Golf Course at 3700 N. Capital Street NW based on inspection report recommendations and United States Environmental Protection Agency Sanitary Survey noted significant deficiencies.

Contract Scope:

- Install impervious membrane system on reservoir roof and perimeter drain system.
- Repair reservoir cracks, spalls, and joints.
- Install concrete baffle wall section.Provide cross-connection elimination improvements.
- Install mechanical mixers, water quality sampling system, and overflow monitoring equipment.
- Construct concrete drainage chamber, piping modifications, and ventilation houses.
- Improve security, electrical, instrumentation and controls, and the Supervisory Control and Data Acquisition (SCADA) systems.Provide landscaping and irrigation system.

Federal Grant Status:

- Construction contract is funded in part by Federal grant.

PROCUREMENT INFORMATION

Contract Type:	Fixed Price	**Award Based On:**	Lowest responsive, responsible bidder
Commodity:	Construction	**Contract Number:**	170130
Contractor Market:	Open Market		

BUDGET INFORMATION

Funding:	Capital	**Department:**	Engineering and Technical Services
Service Area:	Water	**Department Head:**	Craig Fricke
Project:	FA		

ESTIMATED USER SHARE INFORMATION

User	Share %	Dollar Amount
District of Columbia	30.00%	$1,620,200.00
Federal Funds	70.00%	$3,780,800.00
Washington Suburban Sanitary Commission	0.00%	$0.00
Fairfax County	0.00%	$0.00
Loudoun County & Potomac Interceptor	0.00%	$0.00
Total Estimated Dollar Amount	**100.00%**	**$5,401,000.00**

Leonard R. Benson July 12, 2019

Leonard R. Benson, SVP and Chief Engineer — Date

Dan Bae July 12, 2019

Dan Bae, VP
Procurement and Compliance — Date

Matthew T. Brown July 12, 2019

Matthew T. Brown, CFO and EVP
Finance and Procurement — Date

David L. Gadis
CEO and General Manager — Date

Status Report of Public Fire Hydrants for DC Water Services Committee - July 2, 2019

	April Cmte. Report (Apr 01, 2019)	May Cmte. Report (May 01, 2019)	June Cmte. Report (Jun 03, 2019)	July Cmte. Report (Jul 02, 2019)
Public Fire Hydrants:	9,987	9,988	9,988	9,802
In Service:	9,932	9,942	9,934	9,760
Marked Out-of-Service (OOS)	55	46	54	42
OOS - defective requiring repair/replacement	35	37	43	26
% OOS requiring repair or replacement (DC Water goal is 1% or less OOS)	**0.35%**	**0.37%**	**0.43%**	**0.27%**
OOS - due to inaccessibility or temp construction work	20	9	11	16

Note: The number of public hydrants in the DC Water system fluctuates; this number fluctuates as hydrants are added and removed during development or construction activities as well as at the request of the Fire Dept.

Breakdown of Public Fire Hydrants Out-of-Service (OOS) as of July 2, 2019 42

Breakdown of Defective

	0-7 Days	8-14 Days	15-30 Days	31-60 Days	61-90 Days	91-120 Days	> 120 Days	Total
Hydrant Needs Repair/Investigation	3	1	2	0	0	0	0	6
Needs Valve Investigation for Low Flow/Pressure or Shut Test for Replacement	0	0	0	0	0	1	6	7
Needs Replacement	0	1	1	1	0	0	10	13
Defective								**26**

Breakdown of Others

	0-7 Days	8-14 Days	15-30 Days	31-60 Days	61-90 Days	91-120 Days	> 120 Days	Total
Temporarily OOS as part of operations such as a main repair	0	0	0	2	7	0	3	12
Construction* - OOS	0	0	0	1	0	0	0	1
Obstructed Hydrant – OOS hydrant due to operation impeded by an obstruction.	0	0	0	0	0	0	3	3
Others								**16**

**Fire hydrants not accessible due to construction activities. Also includes new hydrants which have not yet been commissioned or old hydrants which will be abandoned as part of ongoing construction projects.*

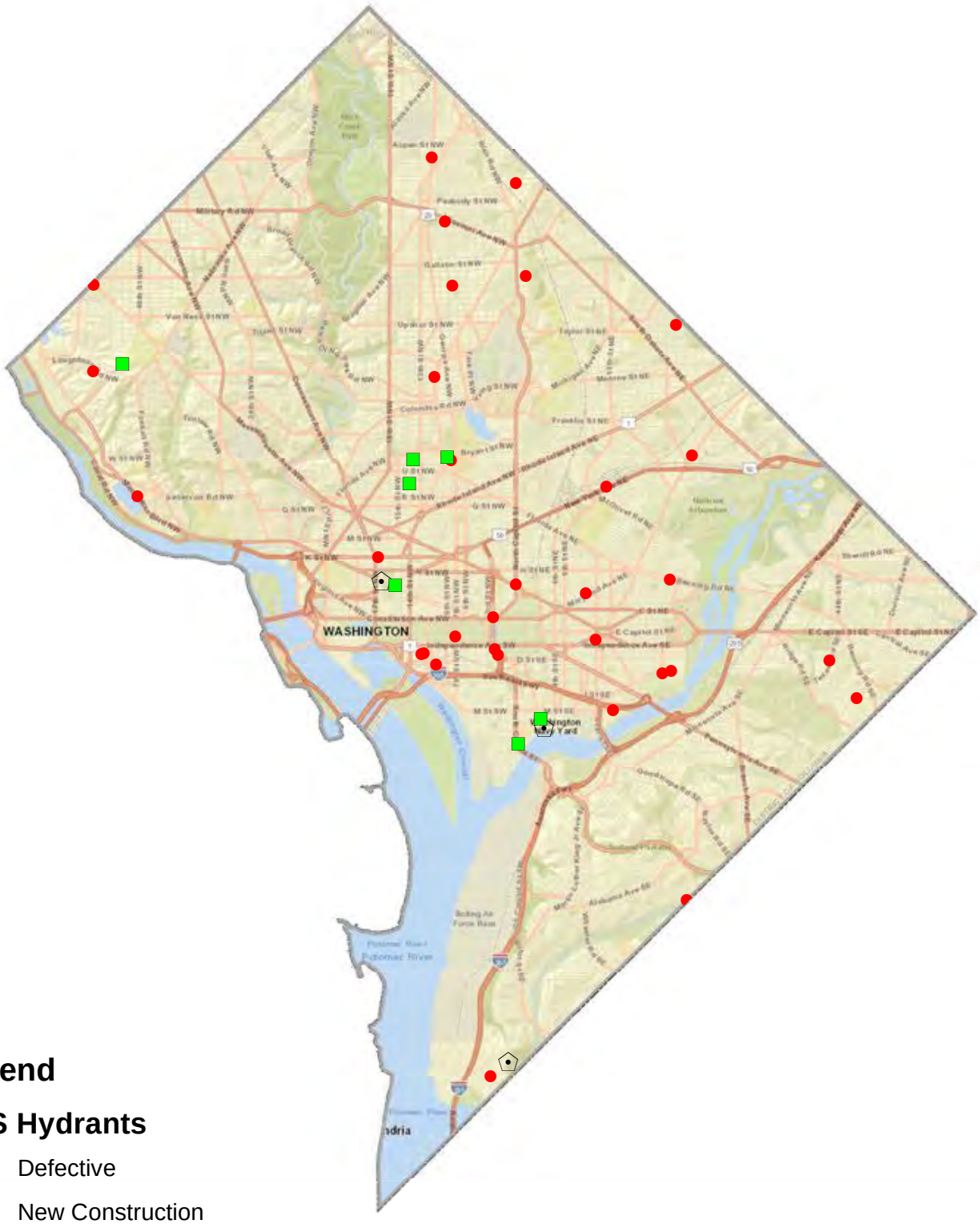
Status of Private Fire Hydrants-Based on FEMS Inspection Reporting

Private Hydrants: 1,298

- **In Service: 1,162**
- **Out-of-Service (OOS): 136**

Map of Public Out-of-Service Hydrants

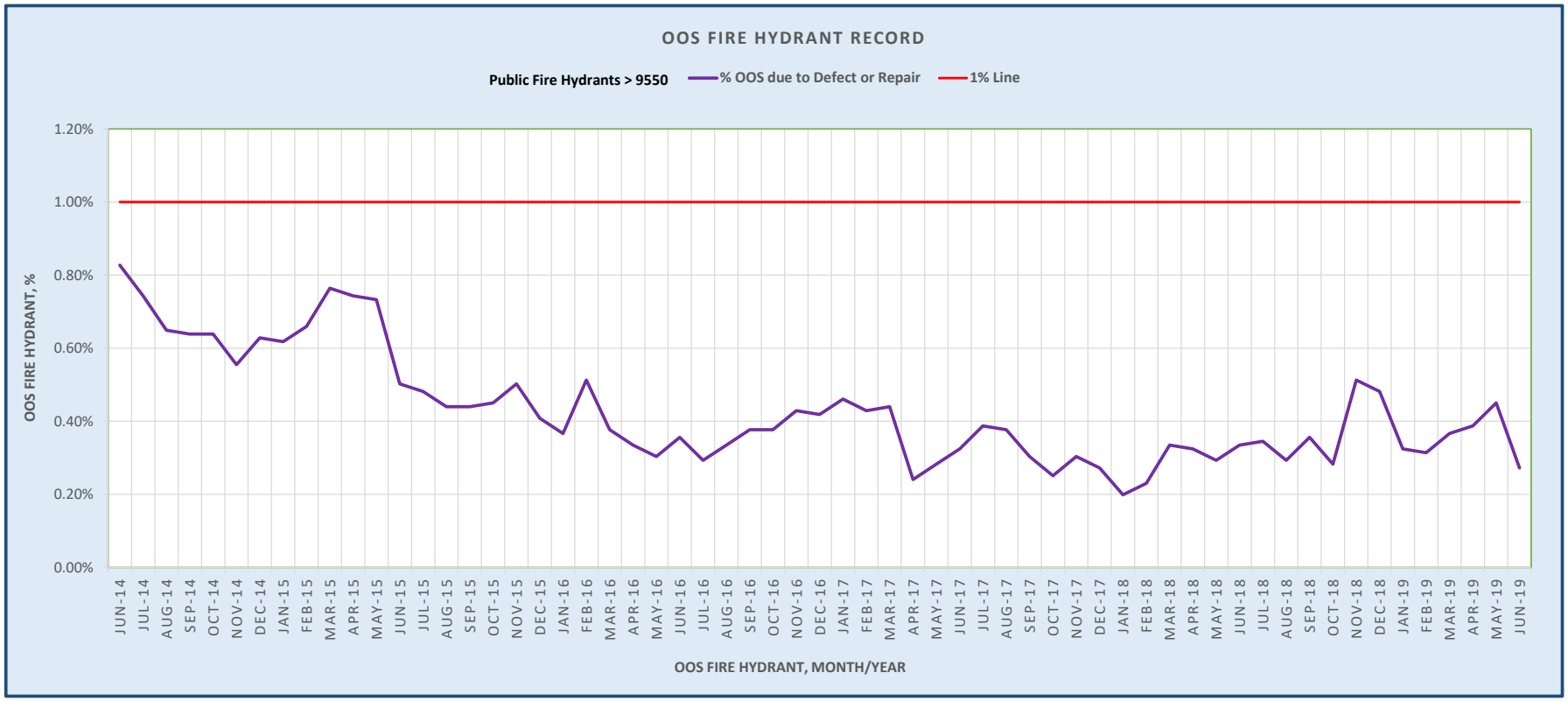
July 03, 2019



Legend

OOS Hydrants

- Defective
- New Construction
- Obstructed
- Temporary


OOS FIRE HYDRANT RECORD
Public Fire Hydrants > 9550
% OOS due to Defect or Repair
1% Line
OOS FIRE HYDRANT, %
1.20%
1.00%
0.80%
0.60%
0.40%
0.20%
0.00%
JUN-14 JUL-14 AUG-14 SEP-14 OCT-14 NOV-14 DEC-14 JAN-15 FEB-15 MAR-15 APR-15 MAY-15 JUN-15 JUL-15 AUG-15 SEP-15 OCT-15 NOV-15 DEC-15 JAN-16 FEB-16 MAR-16 APR-16 MAY-16 JUN-16 JUL-16 AUG-16 SEP-16 OCT-16 NOV-16 DEC-16 JAN-17 FEB-17 MAR-17 APR-17 MAY-17 JUN-17 JUL-17 AUG-17 SEP-17 OCT-17 NOV-17 DEC-17 JAN-18 FEB-18 MAR-18 APR-18 MAY-18 JUN-18 JUL-18 AUG-18 SEP-18 OCT-18 NOV-18 DEC-18 JAN-19 FEB-19 MAR-19 APR-19 MAY-19 JUN-19
OOS FIRE HYDRANT, MONTH/YEAR